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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/551,745	04/18/2000	Daniel Manuel Dias	AM9-98-080C	2613

7590

12/03/2003

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EXAMINER
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NAMAZI, MEHDI

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 12/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/551,745

Applicant(s)

DIAS ET AL.

Examiner

Mehdi Namazi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8, 11-14,16-18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,8,11,13,14,16-18 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 5 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is in response to request for reconsideration filed October 16, 2003.

Claims 1, 3-6, 8, 11-14, 16-18, and 20-22 are presented for further examination.

***Response to Arguments***

2. Applicant's arguments filed October 16, 2003 have been fully considered but they are not persuasive.

a. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., multi-storage system (one or more storage has been claimed) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

b. In response to applicant's argument that "Harney's bandwidth-based ordering logic and replacing it with Chen's deadline-based system", the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-4, 6, 8, 11, 13, 14, 16, 17, 18, 20, and 21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Haney (U.S. Patent No. 5,522,080), and further in view of Chen et al. (Chen) (U.S. Patent No. 5,787,482).

As per claims 1, 8, 11, 17 and 22, Haney teaches a computer system with plurality of workstations with plurality of access requests from data storage ("a computer system including plural client nodes communicating data access requests to one or more storage nodes"; fig. 1, and col. 4, lines 6-14), comprising:

a three level prioritization scheme is used to handle the input/output data stream to improve the through-put of the processor; including provisions for distinguishing between same - priority events occurring at different times ("logic means for associating one or more of the data access requests with respective priorities"; abstract);

the transfers within Groups I, II, III may be assigned relative local priorities. For example, video random access memory transfers within Group I may have a higher local priority than audio transfers ("logic means for sending the data access requests and priorities to the storage nodes"; col. 19, lines 43-46); and

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Local arbitration of these relative local priorities within Group I permits relatively high priority low bandwidth transfers by block transfer controller 368 to take precedence over relatively low bandwidth transfers ("logic means for ordering the data access requests at the storage nodes based on the respective priorities, such that the data access requests are satisfied in consideration of their respective priorities"; col. 19, lines 48-51).

As per claims 1, 8, 17, 18, and 22, Haney teaches the claimed invention as detailed above in previous paragraphs. However, does not specifically disclose priorities include time-based deadlines.

Chen teaches a disk controller with disk access scheduler, which accepts disk access requests having a number of requests with deadlines to expire sooner than all other requests (abstract).

Therefore, it would have been obvious to one ordinary skill in the art to modify the work of Haney because Chen teaches a disk controller with disk access scheduler which accepts disk access requests having a number of requests with deadlines to expire sooner than all other requests, where the disk access scheduler that schedules certain disk access requests that are less urgent than the most urgent request when the most urgent request can wait without missing its deadline (col. 5, lines 19-24).

As per claims 3, 13 and 20, Haney teaches block transfer controller 368 therefore suspends a low priority block transfer operation requested by an execution unit 360a-n.....("logic means for terminating at least one data access request"; cols. 28-29, lines 67-3).

As per claims 4, 14, and 21 Haney teaches in a typical disk input/output operation an application may require a transfer from disk while continuing to process. When the data from disk are actually needed, the application may synchronize on the completion of the transfer ("means for loosely synchronizing the computing and storage nodes with each other"; col. 3, lines 57-61).

As per claims 6 and 16, Haney teaches a virtual random access memory ("wherein the system is a virtual shared disk system"; figs 1).

#### ***Allowable Subject Matter***

5. Claims 5, and 12 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and double patenting rejection.

#### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehdi Namazi whose telephone number is 703-306-2758. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 703-306-2903. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

Mehdi Namazi  
Examiner.  
Art Unit 2188

November 30, 2003

Mano Padmanabhan  
12/1/03

MANO PADMANABHAN  
SUPERVISORY PATENT EXAMINER  
TC 2100